

Election 09/682,715

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**To Mrs. Betsey Morrison Hoey**

U.S. Patent Office

Fax n. 001-703-305-3602

Firenze, May 2, 2002

Dear Mrs. Hoey,

Following my phone call, and with reference to your letter dated April 5, 2002, I send you my comments.

1. The application is apparently divided into two parts: the process and the apparatus. But the process (referred to claims 1-4) cannot be performed by hand, and can only be practiced with an apparatus as described in claims 5-15. Actually the process takes place inside this apparatus. Therefore this apparatus cannot be used to practice another and materially different process. The above apparatus is substantially an electrolytic cell composed of a plurality of bipolar electrodes that must be made only of steel or other iron alloy. This is imperative because iron must be dissolved into water during electrolysis. Such an electrolytic cell could be made also with another configuration, for instance with vertical electrodes, rectangular in shape instead of circular, or the electrodes could be monopolar instead of bipolar, etc. (see US Patent 4,123,339). But, on my opinion, the original configuration is still the best: the insufflated air is uniformly and optimally distributed over each electrode plate. Also the turbulence can be kept high, and uniform across the plates, as the air+water mixture has to pass through the perforated electrode plates, and can be controlled with the recirculating pump and air flow rate.

Based on this considerations the two parts are strictly bounded together, and therefore the application, on my opinion, could be accepted as it is.

2. If the above considerations don't persuade you I could split the application into two. Using as a model the layout of the US Patent 5,368,703, I could file an application describing and claiming solely the process, i.e. iron dissolution by means of an electrolytic cell (that will be the object of the second application: the apparatus) in order to generate Ferric Hydroxide compounds, with the contemporary insufflation of air (=oxygen) on and through the electrodes of the cell, resulting in the simultaneous oxidation of Fe(2) to Fe(3) and of As(3) to As(5) and complexation of Fe compounds with Arsenic (or some other heavy metal), which are insoluble and can be easily separated from treated water.

As already mentioned the second application would be the description and claiming of the electrolytic apparatus (claims 5-15). This apparatus should be mentioned in the first application, in a way similar as it is done in claim 1 of the formerly mentioned US patent (5,368,703). For this I argue that I will have to file a new application, using the usual procedure.

3. I will send you the certified copy of the Italian application (MI 2000 A 001631) by mail as soon as possible.

Please let me know your opinions and suggestions.

Waiting for your response I send you my best regards.

(Giovanni Del Signore)



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